
MUHLENBERG COUNTY

(Muhlenberg County Water Service Area Map)

- Estimated 1999 population of 32,000--91% on public water
- Estimated 2020 population of 34,100--92% on public water
- 590 miles of water lines, with plans for 6 additional miles
- Estimated funding needs for public water 2000-2005--\$4,555,000
- Estimated funding needs for public water 2006-2020--\$0

Muhlenberg County had an estimated population of 32,037 (12,944 households) in 1999 with a projected population of 34,112 (14,566 households) in 2020. Public water is provided to 12,000 customers, or 92 percent of the county's residents. In areas of the county not served by public water, about 70 percent of the households rely on private domestic wells and 30 percent rely on other sources. An estimated 30 households will be added to public water service through new line extensions in 2000-2020.

Estimated Costs - Proposed Projects, 2000-2005

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
MUHLENBERG								-
Muhlenberg Co. W/D				630			3,825	4,455
Muhlenberg Co. W/D #3	6	Est. 30	100					100
TOTAL	6	30	100	630			3,825	4,555

PUBLIC WATER SYSTEMS

The residents of Muhlenberg County are presently provided water by two water districts and three municipal systems. The Muhlenberg County Water District #1 has 5,484 customers in Muhlenberg County and 65 in Logan County, and the Muhlenberg County Water District #3 has 1,812 customers in Muhlenberg County and the City of Sacramento in McClean County. The municipal systems include the Cities of Greenville with 2,100 customers, Central City with 2,173 customers and Drakesboro with 366 customers.

MUHLENBERG COUNTY WATER DISTRICT

PWSID: 0890302
System Type: COMMUNITY
Owner Type: WATER DISTRICT
Surface Source:
Purchase Source:

WATER SERVICE AREAS

MUHLENBERG COUNTY

Kentucky

Prepared By:
Water Resource Development Commission

Department for Local Government
1024 Capital Center Drive, Suite 340
Frankfort, Kentucky 40601-8204
502-573-2382 -- 502-573-2939 fax
<http://dlgnt1.state.ky.us/wrdc/>

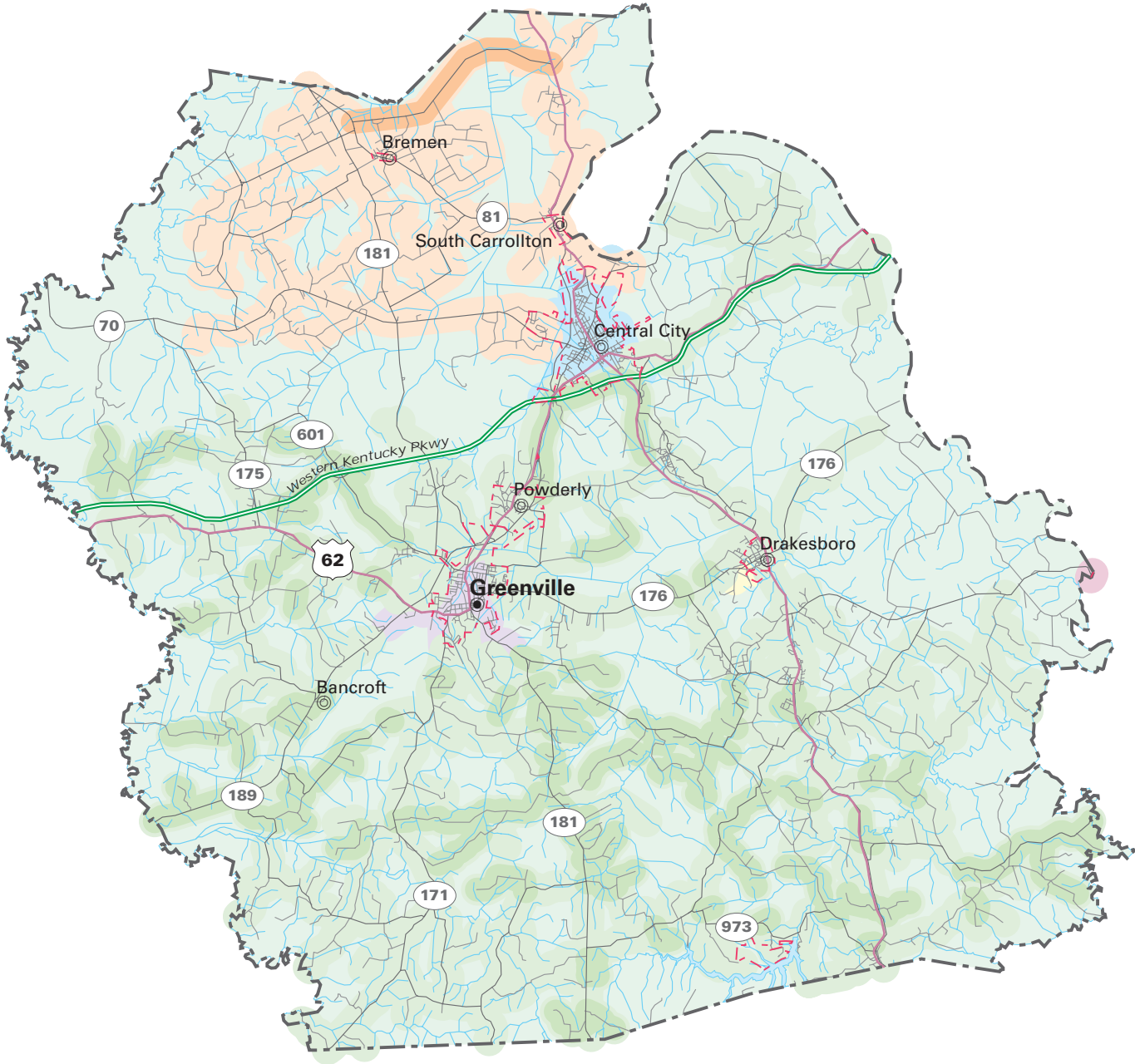
Bob Arnold, Chairman
Lawrence Wetherby, Executive Director

Final GIS & Cartographic Operations By:
Kent Anness & Kim Prough

Data Collection & GIS Input By:
Kentucky Area Development Districts



LIMITATION OF LIABILITY: The Water Resource Development Commission has no reason to believe that there are any inaccuracies or defects in information incorporated in this work and make no representations of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor any such warranties to be implied, with respect to the information or data furnished herein.



WATER SERVICE STATUS BY OWNER

EXISTING SERVICE AREA	PROPOSED SERVICE AREA	
		MUHLENBERG COUNTY WATER DISTRICT #3
		MUHLENBERG COUNTY WATER DISTRICT
		GREENVILLE UTILITIES COMMISSION
		DRAKESBORO WATER DEPARTMENT
		CENTRAL CITY WATER AND SEWER SYSTEM
		BUTLER COUNTY WATER SYSTEM INCORPORATED

Well Source:
Sells Water to:
Treatment Plant Capacity (MGD):..... 0.00
Percent Daily Average Production: 0.00
Total Tank Storage Capacity (gallons):..... 1,850,000.00
Total Service Connections: 5,549.00
Number of Employees:..... 19.00
Treatment Operator Class:.....2D
Distribution Operator Class:
Customer Rate for 1,000 Gallons:..... 5.11
O/M costs 1997:..... 1,446,553.00
O/M costs per Service Connection: 262.10
Net Revenue 1997: 76,091.00
Total Water Produced 1997 (gallons):..... 0.00
Water Sold 1997 (gallons):..... 402,266,400.00
Unaccounted-for Water 1997 (%): 21.35

The Muhlenberg County Water District #1 purchases treated water from the Central City Municipal Water & Sewer Department. The total number of households served is 5,257 (65 in Logan County) which is the largest rural water district in the Pennyriple area. Storage consists of 11 tanks with a total storage capacity of 1,845,000. The District purchases all treated water from Central City and sells water to the City of Drakesboro.

According to the Muhlenberg County Water Supply Plan, the District (which uses approximately 1.3 million gallons of water per day) will experience a slight growth through the year 2010. Since their source of water is Central City and the Green River, there does not appear to be any problems with source and supply. The system does have some areas with problems of pressure and volume due to small line sizes and hilly terrain which affects pressure. To meet current as well as the future needs of the county, projects have been selected and ranked by Water District representatives, elected officials and the Pennyriple Area Development District's Board of Directors as being crucial to the future growth and development of the region.

MUHLENBERG COUNTY WATER DISTRICT #3

PWSID: 0890304
System Type:..... COMMUNITY
Owner Type: WATER DISTRICT
Surface Source:
Purchase Source:
Well Source:
Sells Water to: SACRAMENTO WATER WORKS
Treatment Plant Capacity (MGD):..... 0.00
Percent Daily Average Production: 0.00

Total Tank Storage Capacity (gallons):.....	500,000.00
Total Service Connections:	1,812.00
Number of Employees:.....	7.00
Treatment Operator Class:.....	2D
Distribution Operator Class:	
Customer Rate for 1,000 Gallons:.....	4.64
O/M costs 1997:.....	489,947.00
O/M costs per Service Connection:	272.50
Net Revenue 1997:	87,332.00
Total Water Produced 1997 (gallons):.....	0.00
Water Sold 1997 (gallons):.....	181,265,700.00
Unaccounted-for Water 1997 (%):	14.66

Muhlenberg County Water District #3 also purchases water from the Central City water plant. Total households served by the District are 1,782 and the City of Sacramento in McClean County. Storage consists of two 250,000-gallon water tanks (500,000 gallons total). The distribution system is in good condition with adequate volume and pressure through the system. Water loss is generally held to a minimum and is maintained at less than 15% (including water used in line flushing.)

According to the Water Supply Plan, the District is expected to experience a moderate growth through the year 2010 and is not expected to experience any supply problems, as their source is Central City's water plant, which takes water from the Green River.

DRAKESBORO WATER DEPARTMENT

PWSID:.....	0890106
System Type:.....	COMMUNITY
Owner Type:.....	MUNICIPAL
Surface Source:	
Purchase Source:	
Well Source:	
Sells Water to:	
Treatment Plant Capacity (MGD):.....	0.00
Percent Daily Average Production:	0.00
Total Tank Storage Capacity (gallons):.....	100,000.00
Total Service Connections:	366.00
Number of Employees:.....	4.00
Treatment Operator Class:.....	1D
Distribution Operator Class:	
Customer Rate for 1,000 Gallons:.....	Not available
O/M costs 1997:.....	Not available
O/M costs per Service Connection:	Not available
Net Revenue 1997:	Not available
Total Water Produced 1997 (gallons):.....	Not available
Water Sold 1997 (gallons):.....	Not available
Unaccounted-for Water 1997 (%):	Not available

The City of Drakesboro purchases water from Muhlenberg Water District #1, which in turn purchases their water from the City of Central City. Drakesboro serves 366 households. The distribution system is in good condition, as the City has just completed a major renovation of the distribution system which repaired / replaced water lines damaged by underground coal mine subsidence. So, currently their distribution system has adequate pressure and volume. Storage capacity in the City consists of one 100,000-gallon storage tank. Part of the City's service area included approximately 61 households outside the City's corporate limits.

The Muhlenberg County Water Supply Plan indicates a small growth for the City; with their source being Central City, no future problems are anticipated

CENTRAL CITY WATER AND SEWER SYSTEM

PWSID:..... 0890071
System Type:..... COMMUNITY
Owner Type:..... MUNICIPAL
Surface Source:..... GREEN RIVER
Purchase Source:
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD):..... 4.00
Percent Daily Average Production: 74.00
Total Tank Storage Capacity (gallons):..... 2,500,000.00
Total Service Connections: 2,173.00
Number of Employees:..... 17.00
Treatment Operator Class:..... 2D
Distribution Operator Class: 4A
Customer Rate for 1,000 Gallons:..... Not available
O/M costs 1997:..... Not available
O/M costs per Service Connection: Not available
Net Revenue 1997:..... Not available
Total Water Produced 1997 (gallons):..... Not available
Water Sold 1997 (gallons):..... Not available
Unaccounted-for Water 1997 (%): Not available

The Central City water plant draws its raw water from the Green River. The plant has a capacity of 4.0 million gallons a day and serves approximately 2,135 households in the City, the Muhlenberg County Water District #1, the Muhlenberg County Water District #3, the city of Sacramento in McClean County and the city of Drakesboro. In addition, the plant serves the Green River Correctional Facility. Currently, the plant is operating at 75% of its capacity. The City's distribution system has storage of 2.5 million gallons, which consists of

3 tanks and a clear well. The system does have a small problem with water loss and non-revenue usage (which is currently 17%, slightly higher than the acceptable norm of 15%).

The City currently has a project funded through EDA to replace and enlarge the raw water line going to the treatment plant and construct a new 1.25 million-gallon ground water storage tank. The Green River, as its source, can handle future growth.

GREENVILLE UTILITIES COMMISSION

PWSID: 0890170
System Type: COMMUNITY
Owner Type: WATER DISTRICT
Surface Source: LUZERNE LAKE
Purchase Source:
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD): 1.00
Percent Daily Average Production: 58.00
Total Tank Storage Capacity (gallons): 850,000.00
Total Service Connections: 2,100.00
Number of Employees: 11.00
Treatment Operator Class: 2D
Distribution Operator Class: 3A
Customer Rate for 1,000 Gallons: Not available
O/M costs 1997: Not available
O/M costs per Service Connection: Not available
Net Revenue 1997: Not available
Total Water Produced 1997 (gallons): Not available
Water Sold 1997 (gallons): Not available
Unaccounted-for Water 1997 (%): Not available

The Greenville Utilities Commission operates a water treatment plant with a capacity of 1,000,000 gallons per day. Present utilization exceeds 60% of capacity. The sources of raw water for the plant are Luzerne Lake, City Lake and Greenville Country Club Lake.

Currently, the Greenville Utilities Commission serves 2,121 households and 312 commercial and industrial customers. Storage of treated water is 850,000 gallons in two tanks and a clear well. The distribution system is in good condition with line sizes adequate for water volume and pressures are generally good throughout the system.

The Muhlenberg County Water Supply Plan indicates increased water usage of approximately 20% through the year 2010 due largely to industrial and commercial growth within the City's service area. At some point source may become a problem and additional

raw water may be required. Various options are now being studied to prepare for that circumstance.

PRIVATE DOMESTIC SYSTEMS

About 2,500 people in Muhlenberg County rely on private domestic water supplies: 1,800 on wells and 700 on other sources.

Throughout 90 percent of the county, most wells from depths of less than 300 feet are adequate for a domestic supply. Wells located in the Green River flood plain can produce as much as 100 gallons of hard water per minute. Most wells obtain their water from thick sandstone layers and will yield as much as 60 gpm. In the southwestern corner of the county only a few well yield enough water for a domestic supply. In a small localized area north of Earles, most wells produce less than 100 gallons per day which is far less than is needed for a domestic supply. In the northern and eastern part of the county moderately mineralized water may be obtained locally from deep sandstone formations at depths of 1200 feet.

Generally, ground water is hard to very hard and iron and salt may be present in objectionable amounts. Often ground water becomes saltier with depth.
